The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.
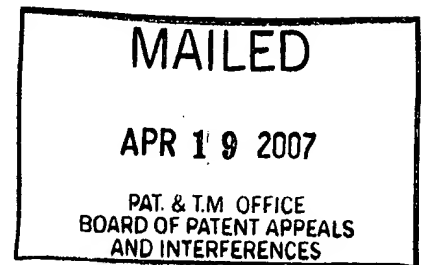
UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DALE E. GULICK and GEOFFREY S. STRONGIN

Appeal 2007-0598
Application 09/853,443
Technology Center 2100

Decided: April 19, 2007

Before ALLEN R. MACDONALD, JEAN R. HOMERE, and
JAY P. LUCAS, *Administrative Patent Judges*.

HOMERE, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134 from the Examiner's Final Rejection of claims 1 through 80. We have jurisdiction under 35 U.S.C. § 6(b) to decide this appeal.

Appellants invented a method and system for protecting biometric input data. Particularly, the invention uses a nonce or a random number to

authenticate a user when the user is inputting or retrieving biometric data from a master device (Specification 5).

Claims 1 and 43 are illustrative of the claimed invention, and they read as follows:

1. A biometric device configured to receive a nonce, to receive biometric data and to transmit the biometric data and the nonce.

43. A method, comprising:

    providing a random number;

    receiving biometric data; and

    transmitting the biometric data and the random number.

    authenticating the biometric data using the random number.

In rejecting the claims on appeal, the Examiner relied upon the following prior art:

Gennaro	US 6,317,834 B1	Nov. 13, 2001
Huang	US 5,856,789	Jan. 5, 1999

The Examiner rejected the claims on appeal as follows:

A. Claims 1 through 24, 26 through 71 and 73 through 80 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Gennaro.

B. Claims 25 and 72 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gennaro and Huang.

Appellants contend[1] that Gennaro does not anticipate claims 1 through 24, 26 through 71 and 73 through 80. Particularly, Appellants contend that Gennaro does not fairly teach or suggest a nonce, as recited in representative claim 1 (Br. 6 and 7; Reply Br. 3). Similarly, Appellants contend that Gennaro does not teach or suggest using a random number to authenticate biometric data, as recited in representative claim 43 (Br. 6). For these same reasons, Appellants further contend that Gennaro and Huang do not render claims 25 and 72 unpatentable (Br. 7). The Examiner, in contrast, contends that Gennaro teaches the cited limitations of representative claims 1 and 43 as using a random number as part of a challenge-response mechanism to generate an encrypt/decrypt a key for encrypting/decrypting biometric data such that a user can securely input or retrieve the biometric data from a database (Answer 4 and 7). The Examiner therefore concludes that Gennaro anticipates representative claims 1 and 4. Further, the Examiner concludes that it would have been obvious to combine Gennaro and Huang to yield the invention as recited in claims 25 and 72 (Answer 8).

We affirm.

---

[1] This decision considers only those arguments that Appellants submitted in the Appeal and Reply Briefs. Arguments that Appellants could have made but chose not to make in the Briefs are deemed to have been waived. See 37 C.F.R. § 41.37(c)(1) (vii)(eff. Sept. 13, 2004). See also *In re Watts*, 354 F.3d 1362, 1368, 69 USPQ2d 1453, 1458 (Fed. Cir. 2004).

ISSUES

The *pivotal* issues in the appeal before us are as follows:

(1) Have Appellants shown that the Examiner has failed to establish that the disclosure of Gennaro anticipates the claimed invention under 35 U.S.C. § 102(e), when Gennaro teaches a random value for generating a key to encrypt/decrypt biometric data?

(2) Have Appellants shown that the Examiner has failed to establish that one of ordinary skill in the art, at the time of the present invention, would have found that the combined disclosures of Gennaro and Huang render the claimed invention unpatentable under 35 U.S.C. § 103(a)?

FINDINGS OF FACT

The following findings of fact are supported by a preponderance of the evidence.

The invention

1.   Appellants invented a method and system for protecting biometric input data (Specification 5).

2.   As depicted in figure 29A, master device (330D) is coupled to a biometric device (4020) via a USB interface logic (134C) and a USB HUB (134C) (Specification 74).

3.   The coupled devices can reciprocally transmit and receive biometric data pertaining to a user (Specification 75).

4.   The coupled devices can reciprocally transmit and receive a nonce (a number used only once) or a random number (Specification 75).

5.   The coupled devices both use the nonce (a number used only once) or the random number in a challenge-response method to encrypt the biometric data, as a way to authenticate a user prior to transmitting or receiving biometric data (Specification 25 and 75).

The Prior Art Relied upon

6.   Gennaro discloses an encrypted biometric model (Figure 7A) for authenticating a user (750) seeking to store the user's biometric data in a database (769) (Abstract, col. 9, ll. 1-10).

7.   As depicted in figure 7A, Gennaro discloses using a user's input biometric sample to create a biometric model for the user.

8.   A random number generator (759) generates random values numbers that are used to form a challenge list of questions (col. 9, ll. 13-17).

9.   The challenge list of questions is used with a corresponding list of answers to generate an encryption key, which is subsequently used to encrypt the user's biometric model (col. 9, ll. 17-24).

10.   After encrypting the user's biometric model, the encryption key is discarded by the system (col. 6, ll. 41-43).

PRINCIPLES OF LAW

1.   ANTICIPATION

It is axiomatic that anticipation of a claim under § 102 can be found only if the prior art reference discloses every element of the claim. *See In re King*, 801 F.2d 1324, 1326, 231 USPQ 136, 138 (Fed. Cir. 1986) and *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1458, 221 USPQ 481, 485 (Fed. Cir. 1984).

In rejecting claims under 35 U.S.C. § 102, a single prior art reference that discloses, either expressly or inherently, each limitation of a claim invalidates that claim by anticipation. *Perricone v. Medicis Pharmaceutical Corp.*, 432 F.3d 1368, 1375-76, 77 USPQ2d 1321, 1325-26 (Fed. Cir. 2005), citing *Minn. Mining & Mfg. Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 1565, 24 USPQ2d 1321, 1326 (Fed. Cir. 1992). Anticipation of a patent claim requires a finding that the claim at issue "reads on" a prior art reference. *Atlas Powder Co. v. IRECO, Inc.*, 190 F.3d 1342, 1346, 51 USPQ2d 1943, 1945 (Fed Cir. 1999) ("In other words, if granting patent protection on the disputed claim would allow the patentee to exclude the public from practicing the prior art, then that claim is anticipated, regardless of whether it also covers subject matter not in the prior art.") (internal citations omitted).

2. OBVIOUSNESS

In rejecting claims under 35 U.S.C. § 103, the Examiner bears the initial burden of establishing a prima facie case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). *See also In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984). The Examiner can satisfy this burden by showing that some objective teaching in the prior art or knowledge generally available to one of ordinary skill in the art suggests the claimed subject matter. *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Only if this initial burden is met does the burden of coming forward with evidence or argument shift to the Appellants. *Oetiker*, 977 F.2d at 1445, 24 USPQ2d at 1444. *See*

also Piasecki, 745 F.2d at 1472, 223 USPQ at 788. Thus, the Examiner must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the Examiner's conclusion.

ANALYSIS
A. 35 U.S.C. § 102(e) REJECTION

As set forth above, representative claim 1 recites a biometric device configured to receive and transmit a nonce as well as biometric data. Similarly, representative claim 43 requires authenticating biometric data using a random number. As detailed in the findings of fact section above, we have found that Appellants' Specification defines a nonce as a single use value or random number (finding of fact 4). We have also found that Gennaro discloses using a random number to generate a key, which is used to encrypt a user's biometric data as well as to authenticate the user during an enrollment process (findings of fact 6-9). Additionally, we have found that Gennaro teaches discarding the key after encrypting a user's biometric data (finding of fact 10). In light of these findings, it is our view that Gennaro teaches the limitation of using a nonce, as recited in claim 1. It is further our view that Gennaro teaches the limitation of using a random number to authenticate biometric data, as recited in representative claim 43. It follows that the Examiner did not err in rejecting representative claims 1 and 43 as being anticipated by Gennaro. It follows for the same reasons that the Examiner did not err in rejecting claims 2 through 24, 26 through 42, 44 through 71 and 73 through 80 as being anticipated by Gennaro.

B. 35 U.S.C. § 103(a) REJECTION

Now, we turn to the rejection of dependent claims 25 and 72 as being unpatentable Gennaro in combination with Huang. We note that claim 25 recites a nonce. We also note that claim 72 requires using a random number to authenticate biometric data. As detailed in the discussion of representative claims 1 and 43 above, we have found that Gennaro teaches using a nonce or a random number to authenticate biometric data. In light of these findings, it is our view that one of ordinary skill in the art would have found it obvious to combine the teachings of Gennaro and Huang to yield the invention as claimed. Therefore, it follows that the Examiner did not err in rejecting dependent claims 25 and 72 as being unpatentable over the combination of Gennaro and Huang.

CONCLUSION OF LAW

On the record before us, Appellants have not shown that the Examiner has failed to establish that Gennaro anticipates claims 1 through 24, 26 through 71 and 73 through 80 under 35 U.S.C. § 102(e). Further, Appellants have not shown that the Examiner has failed to establish that the combination Gennaro and Huang renders claims 25 and 72 unpatentable under 35 U.S.C. § 103(a).

ADDITIONAL ISSUES

We note that claim 1 recites a biometric device <u>configured</u> to receive/transmit a nonce and biometric data. Similarly, we note that claim 14 recites a biometric/master device <u>configured</u> to receive/transmit a nonce

and biometric data. As claimed, neither the biometric device nor master device is required to actually receive or transmit the nonce or the biometric data. They only require the master device to be configured to do so. These claims are thus directed to a non-functional descriptive material. In any further prosecution of these claims, the Examiner should consider not giving any patentable weight to the actual transmission or receipt of the nonce and biometric data. *See In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed Cir. 1994); *In re Ngai*, 367 F.3d 1336, 1338, 70 USPQ 1862, 1864 (Fed. Cir. 2004).

Further, we note that independent claim 28 is written in the form of two individual sentences as opposed to a single sentence as required the USPTO under MPEP 608.01(m). We note a similar deficiency in claim 43. In any further prosecution in this application, the Examiner should consider objecting to these claims including any other claims depending therefrom.

DECISION

We have affirmed the Examiner's decision to reject claims 1 through 24, 26 through 71 and 73 through 80 under 35 U.S.C. § 102(e). We have affirmed the Examiner's decision rejecting claims 25 and 72 under 35 U.S.C. § 103(a).

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

<u>AFFIRMED</u>

PGC

Williams, Morgan & Amerson
10333 Richmond, Suite 1100
Houston, TX 77042